

Amendments

Please amend the claims as follows:

1-76. (Canceled)

77. (New) A process for reducing emissions when operating a blue flame burner, the process comprising:
feeding to a blue flame burner adapted to burn petroleum derived gas oil one or more liquid Fischer-Tropsch product comprising iso-paraffins and normal paraffins, the one or more Fischer-Tropsch product having a density of between 0.65 and 0.8 g/cm³ at 15 °C;
burning the one or more liquid Fischer-Tropsch product using the blue flame burner under conditions comprising a value of lambda of from about 1 to about 2 producing improved flue gas comprising less carbon monoxide and less NO_x than flue gas produced burning only petroleum derived gas oil; and,
performing one or more procedure selected from the group consisting of heating water by indirect heat exchange with the improved flue gas in one or more boiler and heating space directly with the improved flue gas.

78. (New) The process of claim 77 wherein the procedure is heating water with the improved flue gas by indirect heat exchange in a boiler.

79. (New) The process of claim 77 wherein the procedure is directly heating a space with the improved flue gas.

80. (New) The process of claim 77 wherein the one or more liquid Fischer-Tropsch product is Fischer Tropsch kerosene.

81. (New) (New) The process of claim 77 wherein the one or more liquid Fischer-Tropsch product is Fischer Tropsch gas oil.

82. (New) The process of claim 77 further comprising producing less hydrocarbon emissions at the start of burner running than when burning only petroleum derived gas oil.

83. (New) The process of claim 77 wherein the conditions otherwise are the same as operating conditions used to burn petroleum derived gas oil.

84. (New) A process for reducing emissions when operating a blue flame burner, the process comprising:

feeding to a blue flame burner adapted to burn petroleum derived gas oil a blend comprising one or more liquid Fischer-Tropsch product comprising iso-paraffins and normal paraffins, the one or more Fischer-Tropsch product having a density of between 0.65 and 0.8 g/cm³ at 15 °C;

burning the blend using the blue flame burner under conditions comprising a value of lambda of from about 1 to about 2 producing a flame and improved flue gas comprising less carbon monoxide and less NO_x than flue gas produced burning only petroleum derived gas oil; and,

performing one or more procedure selected from the group consisting of heating water by indirect heat exchange with the improved flue gas in one or more boiler and heating space directly with the improved flue gas.

85. (New) The process of claim 84 wherein the blend comprises about 40 wt.% or more of the one or more liquid Fischer Tropsch product.

86. (New) The process of claim 84 wherein the blend comprises about 80 wt.% or more of the one or more liquid Fischer Tropsch product.

87. (New) The process of claim 84 wherein the procedure is heating water with the improved flue gas by indirect heat exchange in a boiler.

88. (New) The process of claim 84 wherein the procedure is directly heating a space with the improved flue gas.

89. (New) The process of claim 84 further comprising producing less hydrocarbon emissions at the start of burner running than when burning only petroleum derived gas Oil.

90. (New) The process of claim 84 wherein the conditions otherwise are the same as operating conditions used to burn petroleum derived gas oil.

91. (New) The process of claim 84 further comprising accurately detecting the flame using an ionization sensor.

92. (New) A process for reducing emissions operating of a blue flame burner, the process comprising:

feeding to a blue flame burner one or more liquid Fischer-Tropsch product

comprising iso-paraffins and normal paraffins, the one or more Fischer-Tropsch product having a density of between 0.65 and 0.8 g/cm³ at 15 °C; burning the one or more liquid Fischer-Tropsch product using the blue flame burner under conditions comprising a value of lambda of from about 1 to about 2 producing a flame and improved flue gas comprising less carbon monoxide and less NO_x than flue gas produced burning only petroleum derived gas oil; and,

performing one or more procedure selected from the group consisting of heating water by indirect heat exchange with the improved flue gas in one or more boiler and heating space directly with the improved flue gas; and,

accurately detecting the flame using an ionization sensor.

93. (New) The process of claim 104 wherein the procedure is heating water with the improved flue gas by indirect heat exchange in a boiler.

94. (New) The process of claim 104 wherein the procedure is directly heating a space with the improved flue gas.

95. (New) The process of claim 104 further comprising producing less hydrocarbon emissions at the start of burner running than when burning only petroleum derived gas oil.

96. (New) The process of claim 104 wherein the conditions otherwise are the same as operating conditions used to burn petroleum derived gas oil.

97. (New) A process for reducing emissions when operating a blue flame burner, the process comprising:

feeding to a blue flame burner adapted to burn petroleum derived gas oil one or more liquid Fischer-Tropsch product comprising iso-paraffins and normal paraffins, the one or more Fischer-Tropsch product having a density of between 0.65 and 0.8 g/cm³ at 15 °C and being selected from the group consisting of a Fischer-Tropsch kerosene and a Fischer Tropsch gas oil;

burning the one or more liquid Fischer-Tropsch product using the blue flame burner under conditions comprising a value of lambda of from about 1.05 to about 1.2 producing improved flue gas comprising 20 mg/kWh or less carbon monoxide and 100 mg/kWh or less NO_x at said value of lambda;

and,

performing one or more procedure selected from the group consisting of heating water by indirect heat exchange with the improved flue gas in one or more boiler and heating space directly with the improved flue gas.

98. (New) The process of claim 97 wherein the conditions further comprise burning the one or more liquid Fischer Tropsch product at a value of lambda of from about 1 to about 1.6 producing improved flue gas having reduced contents of carbon monoxide and NO_x compared to burning only petroleum derived gas oil at the same value of lambda.

99. (New) The process of claim 97 wherein the conditions further comprise burning the one or more liquid Fischer Tropsch product at a value of lambda of from about 1 to about 2 producing improved flue gas having reduced contents of carbon monoxide and NO_x compared to burning only petroleum derived gas oil at the same value of lambda.

100. (New) A process for reducing emissions operating of a blue flame burner, the process comprising:

feeding to a blue flame burner adapted to burn petroleum derived gas oil a blend comprising one or more liquid Fischer-Tropsch product comprising iso-paraffins and normal paraffins, the one or more liquid Fischer-Tropsch product having a density of between 0.65 and 0.8 g/cm³ at 15 °C and being selected from the group consisting of a Fischer-Tropsch kerosene and a Fischer Tropsch gas oil;

burning the blend using the blue flame burner under conditions comprising a value of lambda of from about 1.05 to about 1.2 producing improved flue gas comprising 20 mg/kWh or less carbon monoxide and 100 mg/kWh or less NO_x at said value of lambda; and,

performing one or more procedure selected from the group consisting of heating water by indirect heat exchange with the improved flue gas in one or more boiler and heating space directly with the improved flue gas.

101. (New) The process of claim 100 wherein the conditions further comprise burning the one or more liquid Fischer Tropsch product at a value of lambda of from about 1 to about 1.6 producing improved flue gas having reduced contents of carbon monoxide and NO_x compared to burning only petroleum derived gas oil at the same value of lambda.

102. (New) The process of claim 100 wherein the conditions further comprise burning the one or more liquid Fischer Tropsch product at a value of lambda of from about 1 to about 2 producing improved flue gas having reduced contents of carbon monoxide and NO_x compared to burning only petroleum derived gas oil at the same value of lambda.